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EXAMINER	
SAUNDERS, DAVID A	

ART UNIT	PAPER NUMBER
1644	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/019,139	CAWTHORNE ET AL.	
	Examiner	Art Unit	
	David A. Saunders, PhD	1644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 August 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,4-6,9,11-39,44,45,47,48 and 50-57* is/are pending in the application.

4a) Of the above claim(s) *44,45 and 50-57* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,4-6,9,11-39,47 and 48* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

CLAIMS PENDING

Amendment of 8/29/05 has been entered. Claims 1,4-6,9,11-39,44-45,47-48 and 50-57 are pending.

ELECTION

Applicant's election with traverse of Group I (claims 1,4-6,9 and 11-39; due to the amendment claims 47-48 are added thereto) in the reply filed on 8/29/05 is acknowledged. The traversal is on the ground(s) that PCT International Rules require examination of all claims. This is not found persuasive because the claims do not have unity of invention in accord with PCT International Rules. The claims of Group I are rejected infra over the prior art; there is thus no contribution by applicant over the prior art that would provide for Unity of Invention with any Group that follows Group I.

Thus even if the claims of Group I did, in fact, contribute over the prior art, the lack of any contribution over the prior art by the claims of Group II would fail to provide for Unity of Invention.

The first recited method, beyond that of Group I, is in claims 44-45 and 50 (Group II). Even if the claims of Group I did, in fact, contribute over the prior art, the lack of any contribution over the prior art by the claims of Group II would fail to provide for Unity of Invention. The method of Group II offers no contribution over the prior art that would provide for Unity of Invention, because, for example, applicant considers that "agents" to be screened in the method of claim 1 would include administration of "one or more drugs or foodstuffs, and /or other factors such as diet and exercise" (pg 17, lines 30-31); these treatments for conditions such

as NIDDM are notoriously old and thus provide no contribution over the art. With respect to the administration of any newly developed drugs/agents that might be tested by the method of claim 1, it is to be noted that the method of claim 1 does not describe the drugs per se, by structural features that permits one to identify them, but merely characterizes the properties of the drugs by function; this provides no proper basis for description of what new agents might be used in the method of claims 44-45 and 50; without description of what is to be used, there is no contribution over the prior art; Claims 44-45 and 50 are thus unpatentable by US or by International standards.

Unity of invention with respect to Group III is not discussed by the examiner since all remaining claims thereof (claims 47-48), have been rejoined with Group I.

The claims of Group IV (51-52) are so vaguely recited that it is impossible for one to determine whether they have unity with the claims of Group I.

As to the protein products of Group V (Claims 53-56), these provide no contribution over the prior art that would provide for Unity of Invention. The particular proteins recited in claim 57 are not new; Table I (pg 90) shows that applicant has identified each of these proteins as a known protein or a fragment thereof. A known protein is not a contribution over the prior art. Since applicant has chosen to not provide any sequences for these, any novel protein fragments have not been described in a manner that can be searched. Further, Table I shows that each of the proteins is a different protein, with a different function; the mere fact that they might be differentially co-expressed in a certain pathological state does not alter the fact that they are separate proteins. Further Unity of Invention pertains to one product, the first recited product; claim 57 recites 15 proteins (all originally recited in claim 40 at the International Stage) – i.e. 14

additional inventions after the first recited. Note that the restriction requirement of 7/8/05 has listed these proteins as belonging to separate Groups, rather than species; listing by Groups is deemed proper, since the 15 listed proteins are not art recognized as functional equivalents or as having any common core structure that would render these as different species of a Markush group.

As to the generic protein products encompassed by claim 57, these are not described by the method recited therein. The method is merely a standard method of conducting 2D gel electrophoresis; as such it will provide bands of any and all proteins that do not become destroyed/denatured in the process. The recited method is merely a pathway to finding the proteins claimed, but it does not describe them per se. The method merely designates the proteins, among many that would be separated on a 2D gel, by their function, but it does not describe them per se; without description of what is to be used, there is no contribution over the prior art; Claims 44-45 are thus unpatentable by US or by International standards.

Applicant has also urged that, at the International stage, no lack of unity was found. The examiner presently notes that the IPEA found claims 34, 36-37, 41-42, 44-45 and 50-56 to be of such a nature that no meaningful opinion could be formed. These are precisely the claims included within instant Groups II, IV and V. Since the IPEA did not examine these claims on the merits, it was immaterial to the IPEA as to whether or not there was lack of unity. It would require an undue burden to presently search and/or examine more than IPEA. It is further noted that the present examiner is considering reach through claims 36-37 (which are, in fact, the first two recited uses of a product), which were not examined by the IPEA; thus this present action is examining more inventions than did the examiner at the International stage.

Additionally the examiner notes that, while the IPEA examined the claims of Group I (or at least most of them), it is not even clear that the IPEA was examining the same invention in these claims as is being presently examined. See 112, first paragraph rejections infra indicating the introduction of new matter into the claims. Since even the claims of group I do not pertain to the same invention as that examined by the IPEA, the absence of a finding of lack of unity by the IPEA is irrelevant to the restriction of the presently presented claims.

The requirement is still deemed proper and is therefore made FINAL.

The claims under examination are 1,4-6,9,11-39 and 47-48.

OBJECTIONS TO SPECIFICATION

The disclosure is objected to because of the following informalities; the following misspellings have been noted:

--proteins-- at page 37, line 29

Appropriate correction is required.

OBJECTIONS TO CLAIMS

Claims 1, 11, 20 and 24 are objected to because of the following informalities:

In claim 1, part d), line 3 thereof, "that" should be –those--.

In claim 11, line 4 "subject" should be –subjects--.

In claim 20, line 4 "educed" should be --reduced--.

In claim 24 --a-- should be inserted before "thiazolidinedione".

Appropriate correction is required.

Claim 12 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The types of subjects and the "untreated" condition thereof recited in claim 12 are inconsistent with the types of subjects and treatment thereof recited in claim 1, step a).

Claim 47 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. In claim 47 "body fluid" and "urine" samples are not consistent with the requirement for a "sample of tissue or cells", as recited by claim 1, step b).

112 INDEFINITNESS

Claims 1,4-6,9, 11-39 and 47-48 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is confusing in step a). The examiner considers that this step of the claim defines differential expression in terms of four groups: 1) normal subjects not treated with a compound, 2) normal subjects treated with a compound, 3) dysfunctional subjects not treated with a compound, and 4) dysfunctional subjects treated with a compound (see 112, first para. rejection

infra as to how examiner arrived at this interpretation). The confusion in claim 1, step a) then is that one does not know which expression pattern of the four groups is being compared to which other expression pattern of the four groups, in order to define what proteins are "differentially expressed". The problem carries through to the conclusion recited in step d) – e.g., is the "subject having substantially normal pancreatic islet or beta cell function" recited therein a normal subject who has been treated or one who has not been treated with the "compound" recited in step a)?

In claim 1, part c) it is not clear if the "proteins" identified are the same as the proteins that were identified in step a). Also "differentially expressed" is unclear because there is no indication of what the differentials of protein expression are compared to.

Claim 1 is confusing by reciting "agent" in the preamble and in step c), while reciting "agents" in step d); consistency is required.

In claim 12, lines 6-7 the Markush group member "fa/fa mice lean" is unclear.

The term "closely related" in claim 18 is a relative term which renders the claim indefinite. The term "closely related" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Regarding claim 18, the phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

In claim 31 "the insulin secretogue" lacks antecedent basis.

In claims 35-37, line 2 of each, a singular "protein" lacks antecedent basis.

Claim 36 is confusing because there is no statement as to how "using the protein in an assay for specific binding partners" provides any result that adds to the purpose set forth in the preamble of claim 1 or to the identification achieved in claim 1, step d); since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claim 37 is confusing because there is no statement as to how "using the protein in an assay to screen for agonists or antagonists" provides any result that adds to the purpose set forth in the preamble of claim 1 or to the identification achieved in claim 1, step d); since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claim 38 is confusing because there is no statement as to how a "high through put screening method" relates to the steps of claim 1.

112 DESCRIPTION/NEW MATTER

Claims 1,4-6,9, 11-39 and 47-48 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 1 recites new matter in step a).

In claim 1, step a) recitation of "said samples being obtained before and after treatment of said subjects with a compound which alleviates or improves pancreatic islet or beta cell dysfunction" is new matter. The examiner finds no recitation of "treatment with a compound which alleviates or improves pancreatic islet or beta cell dysfunction" in original claim 1; thus a new concept has been introduced. The examiner takes "said subjects" as referring to both of the "subjects having reduced or increased pancreatic islet or beta cell function and normal subjects" recited in the immediately preceding lines. The examiner considers that this interpretation of the claim defines differential expression in terms of four groups: 1) normal subjects not treated, 2) normal subjects treated, 3) dysfunctional subjects not treated, and 4) dysfunctional subjects treated. It appears that applicant may have derived the concept of having four groups of subjects from the limitations of original dependent claims 8-11; however these claims refer to treatment with the "agent" being tested (i.e. what is recited in the preamble and in step c) of claim 1) and not to some "compound which alleviates or improves pancreatic islet or beta cell dysfunction" which has an activity that is known at the start of the method.

Claims 1,4-6,9, 11-39 and 47-48 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 1 recites new matter in step b).

In claim 1, step b) recitation of "which undergo a biological change in response to the action of insulin" is new matter. The examiner cannot find this recitation anywhere in the oversized disclosure. The single exemplified tissue in the whole disclosure is islet tissue (pg 77),

which is a tissue which secretes insulin, rather than a tissue "which undergo a biological change in response to the action of insulin". Recitation of a subgenus of tissues which is clearly counter to what applicant has contemplated is new matter.

Additionally, the examiner finds no basis for the recitation in step d) of "comparing the results of a) and c)"; the results of step a) constitute a differential expression pattern in islet or beta cell tissue, while the results of step c) constitute a differential expression pattern in tissue or cells which under go a biological change in response to insulin (examiner considers these tissues may not be islet or beta cell tissue). The examiner finds no disclosure basis for such a comparison of patterns of differential expression of proteins from different tissues.

Claim 38 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Applicant was not in possession of a "high through put screening method" for conducting the steps of claim 1.

In particular, the examiner finds no disclosure of any "high through put screening method" that identifies the differentially expressed proteins of claim 1 (e.g. section 1.1.2 at pg 30 presents no "high through put screening method" and the methods disclosed therein, such as digestion of tissue, or isolation of relevant cells are not amenable to use of a "high through put screening method"). Likewise the 2D gel analysis of differential protein expression is not amenable to use of a "high through put screening method". Since applicant's disclosure is

oversized, the examiner has no idea where "high through put screening method" is recited; however it appears methods that are amenable to a "high through put screening method" are disclosed, for example at page 33, line 34-page 34, line 20 and page 49, line 31-page 58, line 15, none of which are assay methods that identify patterns of differentially expressed proteins, as in steps a) – d) of claim 1.

Claims 36-38 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims 36 and 37 appear to be "reach through" claims which pertain to additional screening methods that have a goal different from that of claim 1. The steps of claim 1 identify agents which compare the patterns of differential expression of a set of marker or "finger-print" proteins that may be altered by the contacting of a sample with an "agent" being screened (as set forth in the preamble); the method of claim 1 per se does not identify whether any of the differentially expressed proteins have any causal role in initiating or maintaining the dysfunction.

On the other hand, the methods of claims 36 and 37 have the goal of screening for binding partners, agonists, or antagonists of one of the differentially expressed protein; since the method of claim 1 per se does not identify whether any of the differentially expressed proteins have any causal role in initiating or maintaining the dysfunction, one would not know which of the differentially expressed proteins should be picked for use in the further screening methods of

claims 36-37. In other words, the particular subset of differentially expressed proteins which one would use in the methods of claims 36-37 have not been described, except by a vague functional definition, namely that they are "target proteins" (spec. pgs 14-15). Since applicant's disclosure has merely identified a set of differentially expressed proteins, but has not informed the reader which of these proteins are of interest for conducting the further steps of screening for their binding partners, agonists, or antagonists, further research is required for one to conduct the methods of claims 36-37. While applicant may have pointed out general avenues of identifying which of the differentially expressed proteins should be further selected, these teachings merely inform one how one might determine which of the differentially expressed proteins are "target proteins", but they do not inform one as to what these "Target proteins" are. The "target proteins" are starting materials required for one to conduct whatever further steps may be involved in the "using" methods of claims 36-37. Since the "target proteins" have not been described, except by their general function, method claims 36-37 are rejected for lack of description, in a manner analogous that determined in Univ. of Rochester...69 USPQ2d 1886.

Claim 38 is included in this rejection because, as noted supra, the examiner deems that the "high through put screening method" would be more appropriate for conducting binding assays, such as those involved in conducting the methods of claims 36-37, than for conducting the screening method of claim 1.

112 ENABLEMENT

Claims 1,4-6,9, 11-39 and 47-48 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which

was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The claimed method does not enable a valid identification of agents that treat pancreatic islet or beta cell dysfunction.

Specifically, it is noted that in claim 1, step d) one compares the results of step a) and step c); the results of step a) constitute a differential expression pattern in islet or beta cell tissue, while the results of step c) constitute a differential expression pattern in tissue or cells which under go a biological change in response to insulin (examiner considers these tissues may not be islet or beta cell tissue). The examiner considers that such a comparison of patterns of differential expression of proteins from different tissues is a comparison of apples against oranges. Since the "agent" used in step c) is never contacted with islets or beta cells, one of skill would have no basis for concluding, in step d), that the "agent" used in step c) would have usefulness in "altering the expression levels of said proteins toward that of a subject having substantially normal pancreatic islet or beta cell function."

Claim 47 is rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the use of a tissue sample, does not reasonably provide enablement for the use of a body fluid or urine sample. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to practice the invention commensurate in scope with these claims.

Claim 1, step b) requires that there be a biological sample of tissue or cells which undergo a biological change in response to the action of insulin. The body fluid or urine samples

of claim 47 lack any cells capable of such a response and thus cannot be used in the method of claim 1 sans undue experimentation.

101 UTILITY

Claims 36-38 are rejected under 35 U.S.C. 101 because the claimed invention lacks patentable utility.

Claims 36 and 37 appear to be "reach through" claims which pertain to additional screening methods that have a goal different from that of claim 1. The steps of claim 1 identify agents which compare the patterns of differential expression of a set of marker or "finger-print" proteins that may be altered by the contacting of a sample with an "agent" being screened (as set forth in the preamble); the method of claim 1 per se does not identify whether any of the differentially expressed proteins have any causal role in initiating or maintaining the dysfunction.

On the other hand, the methods of claims 36 and 37 have the goal of screening for binding partners, agonists, or antagonists of one of the differentially expressed protein; since the method of claim 1 per se does not identify whether any of the differentially expressed proteins have any causal role in initiating or maintaining the dysfunction, one would not know which of the differentially expressed proteins should be picked for use in the further screening methods of claims 36-37. One would thus need to conduct further research in order to conduct these methods. Since applicant's disclosure has merely identified a set of differentially expressed proteins, but has not informed the reader which of these proteins are of interest for conducting the further steps of screening for their binding partners, agonists, or antagonists; further research is required for one to conduct the methods of claims 36-37. While applicant may have pointed

out general avenues of identifying which of the differentially expressed proteins should be further selected, these methods merely constitute avenues of further research, more appropriate for obtaining a research grant than a utility patent. Utility requires that there be a specific benefit that exists in currently available form. A patent is not a hunting license. It is not a reward for the search, but compensation for its successful conclusion. See Brenner v. Manson 148 USPQ 689, at pp 695 and 696.

Claim 38 is included in this rejection because, as noted supra, the examiner deems that the "high through put screening method" would be more appropriate for conducting binding assays, such as those involved in conducting the methods of claims 36-37, than for conducting the screening method of claim 1.

PRIOR ART

Prior art cited on from 1449, submitted with the IDS of 10/28/03, has been considered to the extent the references are findable within the IFW file record.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1,4,6,20-21,32-34,36,39 and 48 are rejected under 35 U.S.C. 102(b) as being anticipated by Larsen et al (WO 98/20124).

The reference has a 102(b) date with respect to applicant's GB priority date of 6/25/99. Larsen et al disclose a method of identifying which proteins are differentially expressed in diabetics vs. non-diabetics (normal subjects); these are designated as "diabetes mediating" (DM) proteins. See pages 1-2, 10-11, 16-17. Larsen et al teach that one can identify/screen for agents/compounds that alter the expression levels of these proteins, and that such identified compounds are candidates for further testing of their therapeutic effect. See pages 5, 15, 28-309. Claim 1 is thus anticipated. A step by step comparison of instant claim 1 with the prior art is impossible, given the above noted issues under 112, first and second paragraphs -- e.g. concerning what kind of tissue is being employed in each of the various steps of claim 1, what the "compound" is, and what is compared with what to establish a definition of "differential expression".

Regarding dependent claim(s) 6, note Larsen et al at page 16, line 10.

Regarding dependent claim(s) 4 and 20-21, note Larsen et al at page 10, line 25.

Regarding dependent claim 32, Larsen et al use 2D gel analysis. See pages 16, 25, 28, 37.

Regarding dependent claim(s) 33-34, note Larsen et al at pages 25-26 and 37-39.

Regarding dependent claim 36, Larsen et al teach production of antibodies (specific binding partners) against the differentially expressed proteins (pgs 23-24); screening assays are inherently involved in identifying any of these specific binding antibodies and are consistent with the use claimed.

Regarding dependent claim(s) 39, note Larsen et al at page 31, lines 22+.

Regarding dependent claim 48, Larsen et al identify more than four proteins as being differentially expressed.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1,4-5, 12, 20-23, 26, 32-34 and 48 are rejected under 35 U.S.C. 102(a) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Edvardsson et al (Electroph. 20, 935, 1999).

The reference has a 102(a) date with respect to applicant's GB priority date. Edvardsson et al disclose a method in which the differential expression of proteins in liver tissue from ob/ob mice, in response to a PPAR alpha agonist WY 14,643, is assessed. Edvardsson et al disclose that 16 proteins are up-regulated by agonist treatment. Edvardsson et al indicate that a like method will be used to study the effect of other PPAR activators, such as PPAR gamma agonists, upon differential expression of proteins (page 941). Claims 1 and 48 are taken as anticipated or obvious (since the studies with additional agents are merely suggested). A step by step comparison of instant claim 1 with the prior art is impossible, given the above noted issues under 112, first and second paragraphs -- e.g. concerning what kind of tissue is being employed in each of the various steps of claim 1, what the "compound" is, and what is compared with what to establish a definition of "differential expression".

Regarding dependent claim 12, Edvardsson et al used ob/ob mice.

Regarding dependent claims 5 and 21, the ob/ob mice are an animal model of non-insulin dependent diabetes and insulin resistance. See abstract of Edvardsson et al. See also instant spec. pages 3 and 24 for evidence.

Regarding dependent claims 22-23 and 26, Edvardsson et al suggest further studies using using a PPAR gamma agonist (para. spanning pp 940-941).

Regarding dependent claim 32, Edvardsson et al used 2D gel analysis.

Regarding dependent claims 33-34, Edvardsson et al isolated protein spots from the 2D gel and characterized these by MALDI/TF and electrospray MS/MS (pg 940, col. 1).

DOUBLE PATENTING

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1,4,12-13,20-27,32-34 and 36-39 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-4,14-25,27-28 and 30-33 of copending Application No. 09/980,422. Although the conflicting claims are not identical, they are not patentably distinct from each other because there is an overlap in the subject matter of the two sets of claims. The subset of patients recited in copending claim 1,

step a) (e.g. "insulin resistant") are encompassed by "subjects having reduced or increased pancreatic islet or beta cell function", as recited in instant claim 1, step a). Step b) in copending and instant claim 1 is essentially the same. Step c) in copending and instant claim 1 is the same. Step d) of copending claim 1 is related to step d) of instant claim 1 in the same manner as noted supra for step a). The instantly rejected dependent claims have features variously recited in the copending dependent claims.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

ART OF INTEREST

The art made of record and not relied upon is considered pertinent to applicant's disclosure. Meyers et al and Cooper et al are of interest; these documents post-date applicant's International filing date.

CONTACT INFORMATION

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David A. Saunders, PhD whose telephone number is 571-272-0849. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Chan, can be reached on 571-272-0841. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Typed 10/26/05 DAS

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